MMR_0516 Gerald Lee Abegg (1937-2016) NER HUB Division

Gerald Lee Abegg, a distinguished educator and scientist, was a Professor of Science Education, Emeritus, at Boston University. He held an impressive academic background, having graduated from Washington University in St. Louis with an AB in Chemistry and an MSE. Later, he earned his PhD from the University of Nebraska. Beyond academia, Gerald was actively involved in scouting since childhood and served as the longtime scoutmaster of Troop 160 in Lexington. His passion for exploration took him to all seven continents, making him a true world traveler. His legacy lives on through his contributions to education and his impact on countless lives.

Path to MMR - Part 1 by Gerald Abegg MMR 516 A t the end of last summer I completed the seventh Achievement Certificate that made me eligible for Master Model Railroader. When all the paperwork was filed with the NMRA, I was awarded MMR Certificate #516. This article describes my pathway to the MMR and offers suggestions and encouragement to other HUB members who I would like to see earn this Achievement.

My advice to everyone is to get started with something you already do, then research the requirements and read articles about how to do the various Achievement Certificates. On the NMRA website you can find copies of "Year of the MMR" that was published in Scale Rails in 2008-2009.

These articles are posted under the Achievement Program and are immensely helpful. Download the certificate requirements from the NMRA website and keep a log of all your activities to use in filling out these forms. When I started on the Achievements I had no intention of becoming a MMR.

I was only interested in receiving recognition for activities I was already doing. So I began with Association Volunteer. Since I served on the Board of Directors for three years, was Show Manager for six years and worked with many scouts on RR Merit Badge, I had all the activities and times needed to complete that certificate (3/1/2010).

Next I moved on to Chief Dispatcher (3/1/2010) since I had become an active operator and had done some dispatching on Bruce Robinson's Valley Junction RR. The hours of operation in the various positions were easily completed, but the hardest thing was to develop a timetable and line chart for that part of the requirements. I found the article "Chief Dispatcher" #9 in the "Year of the MMR" most helpful

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So I began with Association Volunteer. Since I served on the Board of Directors for three years, was Show Manager for six years and worked with many scouts on RR Merit Badge, I had all the activities and times needed to complete that certificate (3/1/2010). Next I moved on to Chief Dispatcher (3/1/2010) since I had become an active operator and had done some dispatching on Bruce Robinson's Valley Junction RR. The hours of operation in the various positions were easily completed, but the hardest thing was to develop a timetable and line chart for that part of the requirements.

I found the article "Chief Dispatcher" #9 in the "Year of the MMR" most helpful. I had done some very amateurish modeling over the years but was relatively new to doing detail hobby work and felt that I had much to learn. I attended many clinics at NER and NMRA conventions where I learned tips for weathering, construction, using the last two-inches in front of the backdrop, making cheap trees, etc.

I built two HUB modules and detailed them with structures and scenery. I then started to rebuild my home layout in Lexington as a way to practice some of these new skills. ENGINEER ELECTRICAL ENGINEER CIVIL (5/1/2012). After my move to Westford in 2008 I started a new layout using only part of the yard from Lexington.

The new layout is 14-ft. x 28-ft. and is constructed entirely of 2-ft. x 4-ft. modules in an "M" shape to create lots of mainline and some interesting industrial sidings. Wiring the new layout met the electrical requirements, but I had to document everything with a wiring circuit for the layout and circuit diagrams for the powered turnouts and LEDs. I learned how to create circuit diagrams and how to incorporate LED's in circuits to make panel control lights.

I also developed confidence in creating dwarf signals to indicate track p o w e r , occup ancy, a n d direct ion. In a c o n v e r s a t i o n with Keith Shoneman, he told me that I had probably met the E n g i n e e r E l e c t r i c a l Achievement with what I had already done to my new layout, so he visited the layout and gave me tips on how to finish the application process. While building the new home layout I had hand-laid some track and built turnouts using the Fast Tracks system.

Although the first attempts were pretty rough, I was able to perfect my techniques so I could build the required three hand-laid structures for Merit Award judging. Since I had already built several excellent turnouts and a crossover, all I needed to do to complete the Engineer Civil certificate was build a third item.

I designed a 20- degree crossing (diamond). Building it required electric frogs, so figuring out how to isolate the frogs, and wire it for operation, required some study and testing.
The first attempt looked great, but cars would notgo through without derailing, so I built a second one and it worked! Don Howd and Keith Shoneman evaluated my layout in 2012, and I received the necessary merit awards to complete both the Engineer Electrical and Civil certificates.

At this point I was prepared to stop because I felt like most modelers – I didn't want to get into building contest models. Don told me I didn't have to enter contests but rather that I must build models that would be judged for Merit Awards. He suggested that I build a model or two, submit them for judging and then decide if I should continue or not.

MASTER BUILDER-CARS (2/1/2013) Don Howd sent me plans for a wooden rail and tie car that I scratch-built in the summer of 2012. It won a merit award and 2nd place in non-revenue cars

and the best new modeler award at the NER in Syracuse last September. The two structures that I scratch-built did not receive merit awards but the judges' feedback helped me recognize where I could and should improve the models and some of my construction techniques.

Inspired by this "victory" and, since building cars was a totally new experience for me, I decided to see if I could succeed with Master BuilderCars. I spent the next six weeks researching and building more cars. In order to qualify, I needed to scratchbuild three more cars and super-detail a total of eight cars.

This is where I had to learn many new tricks and techniques. With the help of the MMR articles on the NMRA website and several Santa Fe books in my library, I researched and documented cars to build. I scratch-built a wooden reefer, wooden box car, and wooden flat car. I then built a tank car and reefer car using Tichy kits.

These two models were built as suggested in the kit, but I added more details. This required me to understand the details of the braking system so I could add the extra piping and hosing for the air pressure lines and hand release levers.

Next I kit-bashed a Tichy tank car kit to create a Santa Fe fire suppression water tank car. For this car I had to locate the brakes on the platform level as well as add other details to match the Santa Fe drawings and photos I used as reference.

I also had to make my own decals since I could not find red decals to spell out "fire suppression" on a white tank car. For the required passenger car I obtained a set of brass car sides from the Santa Fe Modeling & Historical Society that replicate the Santa Fe Chief passenger cars.

These car sides are designed to fit Con Cor car kits with modest modifications. As I proceeded to kitbash this combination I had to learn how to glue plastic to brass and maintain a seamless joint.

I added lots of details to the undercarriage, and roof vents and grab irons where appropriate to match the prototype Santa Fe Chief. There were a number of challenges in building these car kits. The hardest thing was to criticize my own work and improve the imperfections.

I learned that my finishing work needed to be done more carefully and that I also needed to be more careful with excess glue on the wood. Although I have an airbrush I had not used it for detailed work where the final finish is critical. So, it took some serious practice to get the paint application in fine thin layers.

I now have several old junk cars that have several very bad layers of poorly applied paint. The lacquer paints required me to work outside so I installed my spray hood in the garage.

Although I had used acrylic paints on buildings and parts of my layout, I never was able to get what I considered great results painting cars with acrylics.

I found that acrylics don't dry fast enough and it is too easy to get the paint on too thick and unevenly. I delivered these seven completed cars to Don just before I left for a Christmas trip and received word that I earned the Master Builder-Cars Achievement Certificate when I returned in January 2013.

MASTER BUILDER-STRUCTURES (9/1/2013)

On to structures and scenery needed to complete the MMR. I set a goal of completing everything by the end of the summer so I could receive the MMR at the fall Lakeport NER Convention in October. The Master Builder-Structures presented a different set of problems.

I needed 12 structures including one bridge and 6 of them scratch-built. Over the years, I had built a number of structures. Many were clearly not of the quality that I wanted to submit for review. However, I had built an icehouse in 1967 using a Suydam kit. I updated it with new scratch-built icing platforms so I could make it a feature on the two modules I built in 2002. I decided to use it as one of my 12 structures so I added more details and weathering.

In 2004, I built several buildings for Bruce Robinson's layout while recovering from heart surgery. When preparing the documentation for the structures achievement, I was able to submit photos and a detailed description of one of those buildings.

I had also built a triangular-shaped building using DPM brick-faced sections and had done some detailing on this. I added a roof-mounted HVAC, downspouts, gutters, and exterior lighting and then weathered it a bit more and mounted it on a better-looking, more prototypical foundation.

So, now I had 3 buildings I felt satisfied would work. While rail-fanning in Colorado more than 10 years ago, I photographed several buildings. After I returned home from that trip, I used a few of these photos to scratch-build a modest western carpentry shop / furniture builder structure.

With some extra work on a new sign and better weathering, I had building number four for my set. Next I turned to the two scratch-built structures that were not award-winners, and responded to the judges' comments. I added electric meters to the outside, improved the interior detailing and made the weathering more realistic to match the photos and drawings I was using as part of the construction plans.

I also did some touch-up painting. At this point I was half-way complete with three scratch-built (wood) and three superdetailed structures. Two years ago I had started building two different Craftsman kits. One was a Bar Mills building complex using laser-cut wood and card stock. The other was a resin kit of a Corner Store.

These kits used Grandt Line windows and lots of details. The most difficult part of these kits was the need to do very careful detail painting in several colors and to add window treatments.

With a few weeks of focused work I was able to complete these two buildings and add them to my list.

Now came the hard part – the final four structures that had to be scratch-built. Don Howd had sent me an article on wood pile trestles, so I revised this plan to match trestles used by the Santa Fe in the area I model, and built a trestle on my home layout.

There is a slight curve in the track where this trestle fits so I had to develop a jig to prefab the pilings and then fit them to the curve. It worked beautifully and the trestle received a Merit Award and scratch-building credit.

The Santa Fe RR used the Harvey Food Service in all its diner cars so when I found a picture of the original Harvey House in Lawrence, KS, I decided to make that my next scratch-built structure.

Using the photo from a book and info from the Internet, I made detailed construction drawings of the building and then built it entirely of wood. After mounting it on a base I detailed the building, yard, brick walkway, handicap ramp etc. The last two scratch-built buildings were the Olpe, KS station and a Santa Fe freight house.

The station is typical of most of the small-town western stations of the Santa Fe. Since it is a frame structure with board and batten siding I was able to build the entire structure using Northeastern Scale Lumber. I finished it in the colors of my Santa Fe RR and added a brick platform and lots of details.

The freight house was built using the drawings and diagrams found on pages 42 and 43 of the September, 2011 Model Railroader.

The last achievement certificate I completed was the scenery. The requirements stated that in HO I had to detail 32 square feet of scenery and this needed to be visually isolated from the rest of the RR.

Since my layout looks like a tall "M" that is 14 feet wide and 28 feet long, I decided to use one of the center legs that already had the most scenery completed. This leg was 24 feet by 2 feet and featured two towns, a double-track main line and several sidings. The track work and basic scenery had been completed several years ago so, last summer, I went to work detailing it.

I added a pond, several culverts to provide trackside drainage, new roads, power poles and lines, and trees, shrubs, and flowers. The backdrop was painted "HUB module blue" so I needed to add backdrop scenery and backdrop buildings. The hardest thing for me was to connect the scenery to the backdrop since my Kansas scene is mostly open space, agriculture fields and pastures with few trees.

I cut most of the trees off the photo backdrop to show only fields and then used static grass and tall weeds to connect the backdrop to the layout surface. This solution was not great but it worked. So, I got the Merit Award and reached my goal of completing all the work by the end of the summer 09 01 2013.

So, what did I learn that could help you? ι Used the NMRA website/ Achievement Program & articles for reference. I built models for Merit Awards with as much detail as possible. I learned air brush techniques - good with lacquer/ fair with acrylic.

I documented the prototype and replicated it as closely as possible. I described what is planned, then documented how it was done. I scratch-build with wood; add details in wood, metal and plastic. I primed all wood first, or stained before gluing. When working with styrene, use very small amounts of solvent/glue. Keep all building parts square.

I detailed the insides of buildings and modeled electrical features: (nonworking) lamps, wires, lights over doors, etc.
I started with kits and then added details when modeling cars, which can be the most challenging. I discovered inkjet printer decals from Micro-Mark and kept records. Document your work and use prototype references that match your railroad.

I hope this long and detailed article will encourage at least a few HUB Division Members to pursue the Achievement Program certificates. Perhaps soon, we will have another MMR in our midst.